ABSTRACT

Production processes are provided which can produce, at a relatively low temperature and in a reduced number of steps, anatase titanium oxide powder having high photocatalytic activity and large specific surface area and anatase titanium oxide slurry having high storage stability and dispersibility. The slurry thus obtained can also be coated, as a coating material having photocatalytic activity, on materials having low heat resistance.

In the production process of anatase titanium oxide powder according to the present invention, a titania sol solution, a titania gel, or a titania sol-gel mixture is heat treated in a closed vessel under pressure, and the treated product is then dried to produce anatase titanium oxide powder. In the production process of anatase titanium oxide slurry according to the present invention, a titania sol solution, a titania gel, or a titania sol-gel mixture is heat treated in a closed vessel under pressure, and the treated product is then dispersed/stirred to produce anatase titanium oxide slurry.